

**ABSTRACT**

The invention is directed to expression of non-plant proteins in rice plants. Expression is optimized by use of a non-rice promoter of a monocot protein gene and its corresponding signal peptide for expression of the non-plant protein in rice plant at high yields. The invention is useful for making human proteins, polypeptides and peptides in rice seeds. The expressed protein product can be isolated from the rice seed for administration to humans or other animals.